

ABSTRACT OF THE DISCLOSURE

A vertical-cavity surface emitting laser diode comprises: a first and a second reflectors; an active  
5 layer provided between the first and the second reflectors; and an oxidizee layer having a non-oxidized part and an oxidized part provided around the non-oxidized part. An electric current is injected into the non-oxidized part. The oxidizee layer has a proton-  
10 containing part including proton at least at a position substantially enclosing the non-oxidized part.